AERONAUTICAL ACCESSORIES, INC.
P.O. BOX 3689
BRISTOL, TENNESSEE 37625-3689 U.S.A.
TELEPHONE: 423-538-5151 800-251-7094
TELEFAX: 423-538-8469 E-MAIL: sales@aero-access.com

TECHNICAL BULLETIN

TB No. AA-01167
Revision A

SUBJECT:	**Hoist Fairing Assembly** P/N 412-156-100
MODELS AFFECTED:	Bell 205A-1, 205B, 212, 412, 412EP, 412CF Agusta AB412, AB412EP with the subject Hoist Fairing Assembly installed.
DESCRIPTION:	This Technical Bulletin is being issued in response to an incident of fatigue cracking in the Hoist Fairing Assembly. This bulletin provides the procedures and identifies the materials required to accomplish the necessary crack repair and to reinforce the area against future damage.
LIMITATIONS:	The repairs in this bulletin are limited to cracks in the mounting area of the Hoist Fairing Assembly. The cracks are not to exceed 2" in length nor 1/8" in width. Repairs are also limited to 1 crack per radius. Hoist Fairing Assemblies exceeding these repair limitations must be replaced.
MANPOWER:	Approximately 2.0 hour.

IF OWNERSHIP OF AIRCRAFT HAS CHANGED, PLEASE FORWARD THIS BULLETIN TO NEW OWNER

MATERIAL:

The following materials are required to comply with this bulletin:

Hexcel 7725 Fiberglass or equivalent
- Construction is 54 Warp 18 Fill (Thread count per inch)
- 2/2 Satin Weave
- .0093 inches thick

Adtech Marine 820 Resin with Adtech 823 Hardener or equivalent
- Mix Ratio by weight: 100R:18H
- Pot Life: 40-50 minutes
- Cure Time: 7 days@ 77°F or 16 hours@ 150°F
- Tensile Strength: 43,000 psi
- Compressive Strength: 8,101 psi
- Impact Strength: 3.46 in-lbs.
- Heat Deflection Temp.: 165°F

80 grit sandpaper
Acetone

RECOMMENDED TOOLS:

Rubber or Plastic Squeegee
Acid Brush
Roller

REQUIRED TOOLS:

Drill with a #30 (.127 - .133 diameter) Drill Bit

WEIGHT AND BALANCE:

Negligible.

PUBLICATIONS AFFECTED:

None affected.

ACCOMPLISHMENT INSTRUCTIONS:

1. Remove the Fairing Outboard Half (412-156-103) from the fairing assembly.

2. Disconnect P16 and P17 connectors from the aircraft.

3. Remove the hoist motor from the Hoist Support Assembly. Retain hardware for reinstallation.

4. Remove the Fairing Inboard Half (412-156-101) from the Hoist Support Assembly. Retain hardware and doublers for reinstallation.

5. Inspect the damaged area and determine whether the part should be replaced or repaired. (See Limitations Section)

NOTE

Close inspection is necessary as the problem area can often extend farther than what is easily detected.

6. Sand approximately 1 inch on each side of the damaged area with 80 grit sandpaper. Sand the inside and outside until the paint and primer is gone from this area.

7. Stop drill at the end of the crack using a #30 (.127-.133 diameter) drill bit.

8. When sanding is complete, thoroughly vacuum the surface of dust and debris. Wipe the surface clean with Acetone to aid in adhesion process.

9. Measure the length of the crack and cut two pieces (one for the inside and one for the outside) of fiberglass cloth (Hexcel 7725 or equivalent) approximately .50 inches more than the length and width of the crack.

10. Cut four additional pieces of fiberglass cloth (Hexcel 7725 or equivalent) approximately .50 inches larger than the previously cut pieces.

11. Mix the resin (Adtech Marine 820 or equivalent) and hardener (Adtech 823 or equivalent) for the repair.

NOTE

Preparation on a sheet of plastic will make it easier for the fabric to be lifted from the work area once ready.

12. Dab a thin layer of resin (recommended with an acid brush) on the outside surface of the fairing over the affected area. (Ref. Figure 1)

13. Place one of the smaller pieces of fiberglass cloth on the layer of resin. (Ref. Figure 1)

14. Dab the layer of fiberglass cloth with a layer of resin until it has been thoroughly saturated. Work air bubbles from the center out (recommended with a squeegee or roller) to ensure an adequate bond. (Ref. Figure 1)

15. Place one of the larger pieces of fiberglass cloth on the layer of resin. (Ref. Figure 1)

16. Dab this layer of fiberglass cloth with a layer of resin until it has been thoroughly saturated. Work air bubbles from the center out to ensure an adequate bond. (Ref. Figure 1)

17. Repeat steps 12 through 16 for the inside surface of the fairing.

18. Place another of the larger pieces of fiberglass cloth on the layer of resin on the inside surface of the fairing.

19. Dab this layer of fiberglass cloth with a layer of resin until it has been thoroughly saturated. Work air bubbles from the center out to ensure an adequate bond.

20. Place the last of the larger pieces of fiberglass cloth on the layer of resin on the inside surface of the fairing.

21. Dab this layer of fiberglass cloth with a layer of resin until it has been thoroughly saturated. Work air bubbles from the center out to ensure an adequate bond.

22. After allowing resin to cure, inspect the repair before putting the part back into service.

NOTE

Use the edge of a coin to tap the repaired area to check for hidden voids. The entire structure should resonate with the same solid sound. If not, sand down the repair and repeat steps 12 thru 22.

23. Cut or grind the rough edges of the patch to conform to the previous edge of the part.

24. Fill any visible voids, sand smooth, prime and paint the repaired area to match existing finish.

25. Place the Fairing Inboard Half (412-156-101) over the end of the Hoist Support Assembly and place against the inboard half of the Hoist Support Assembly. Align the holes in the Fairing Inboard Half with the holes in the Hoist Support Assembly. Attach fairing half and doublers using the previously removed hardware.

26. Reinstall the hoist motor on the Hoist Support Assembly using the previously removed hardware.

27. Reattach the connectors P16 and P17 to the aircraft.

28. Reinstall the Fairing Outboard Half (412-156-103) and secure the cowl fasteners.

29. Repair complete.

Any questions regarding this bulletin should be addressed to:

AERONAUTCAL ACCESSORIES, INC.
PRODUCT SUPPORT
1-800-251-7094

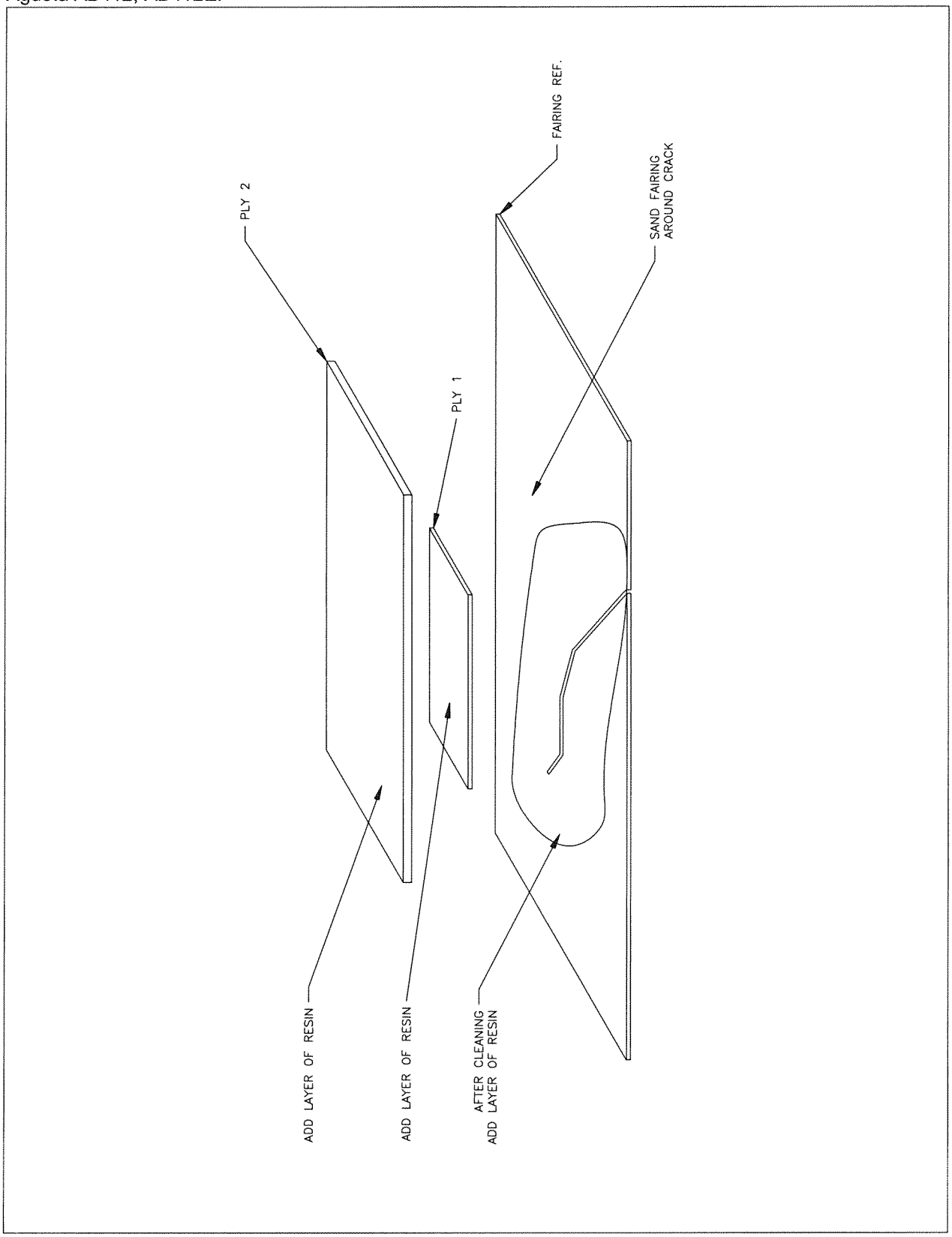
FAIRING REF.
SAND FAIRING AROUND CRACK
PLY 2
PLY 1
ADD LAYER OF RESIN
ADD LAYER OF RESIN
AFTER CLEANING ADD LAYER OF RESIN

Figure 1